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State Health Director

October 6, 2011 (4 pages)

To: All North Carolina Health Care Providers
From: Megan Davies, MD, State Epidemiologist
Re: **2011–12 Influenza Season: Update for NC Clinicians**

This memo provides guidance to NC clinicians and information regarding flu surveillance activities in North Carolina. This guidance might change as the influenza season progresses; updated information is available at www.flu.nc.gov.

CLINICAL MANAGEMENT

- **Decisions regarding treatment should be based on clinical and epidemiologic information, rather than on test results.** Rapid tests cannot rule out influenza infection, and more time is required for other test types (e.g. PCR or viral culture). If clinically indicated, treatment should not be delayed while awaiting laboratory confirmation. Current epidemiologic information is available at www.flu.nc.gov.
- Certain patients are at increased risk for influenza-related complications. These include:
 - Children younger than 2 years old
 - Adults 65 years of age or older
 - Pregnant women and women up to 2 weeks postpartum
 - American Indians and Alaskan Natives
 - Persons with certain medical conditions including: Asthma; neurological and neurodevelopmental conditions; chronic lung diseases (such as COPD and cystic fibrosis); heart diseases (such as congenital heart disease, congestive heart failure and coronary artery disease); blood disorders (such as sickle cell disease); endocrine disorders (such as diabetes); kidney disorders; liver disorders; metabolic disorders (such as inherited metabolic disorders and mitochondrial disorders); and weakened immune system due to disease or medication (such as people with HIV or AIDS, or cancer, or those on chronic steroids)
 - People younger than 19 years of age who are receiving long-term aspirin therapy
 - People who are morbidly obese (Body Mass Index, or BMI, of 40 or greater)
- Not all patients with suspected influenza infection need to be seen by a health care provider. Patients who report febrile respiratory illness but do not require medical care *and are not at high risk for complications of influenza* should be instructed to stay at home in order to decrease opportunities for transmission. Patients should seek emergency medical attention for any of the following:
 - Difficulty breathing or shortness of breath
 - Pain or pressure in the chest or abdomen
 - Sudden dizziness
 - Confusion
 - Severe or persistent vomiting
 - Flu symptoms that improve but then return with fever and worse cough
 - In babies, bluish gray skin color, lack of responsiveness, or extreme irritation.



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- Clinical judgment is an important factor in treatment decisions. Treatment is recommended as early as possible for individuals with suspected or confirmed influenza who have any of the following:
 - Illness requiring hospitalization,
 - Progressive, severe, or complicated illness, regardless of previous health status, or
 - Increased risk for severe disease (e.g. persons with certain chronic medical conditions, persons 65 or older, children younger than 2 years, and pregnant women).

Antiviral treatment also can be considered for any previously healthy, symptomatic outpatient not at high risk with confirmed or suspected influenza on the basis of clinical judgment, if treatment can be initiated within 48 hours of illness onset.

- If antiviral treatment is prescribed, a neuraminidase inhibitor (oseltamivir or zanamivir) should be used. Oseltamivir resistance among 2009 H1N1 influenza viruses has only occurred sporadically. If oseltamivir-resistant influenza viruses become prevalent (as during the 2008–2009 flu season), treatment with either zanamivir or a combination of oseltamivir plus rimantidine or amantadine might be necessary. Information regarding currently circulating flu strains is available at www.flu.nc.gov. Detailed antiviral use guidance—including testing and treatment for suspected oseltamivir-resistant influenza—is available at <http://www.cdc.gov/flu/professionals/antivirals/index.htm>.
- **Treatment is most effective when started within 48 hours of illness onset. However, treatment of persons with prolonged or severe illness can reduce mortality and duration of hospitalization even when started more than 48 hours after onset of illness.**

TESTING

- Rapid influenza diagnostic test (RIDT) sensitivities are approximately 50–70% when compared with viral culture or reverse transcription polymerase chain reaction (RT-PCR). Therefore, a negative RIDT does NOT rule out infection and should not be used as a basis for treatment or infection control decisions during periods when influenza is known to be circulating. Additional information is available at <http://www.cdc.gov/flu/professionals/diagnosis>.
- Confirmatory influenza testing at the North Carolina State Laboratory of Public Health (SLPH) is primarily intended for virologic surveillance, rather than diagnostic purposes. This testing will focus on the following groups:
 1. A sample of patients with influenza-like illness seen at facilities participating in the Influenza-Like Illness Network (ILINet).
 2. Patients who die with influenza-like illness but have no laboratory evidence of influenza infection.
- Testing at SLPH can also be considered for other patients if the local health department determines that such testing is necessary for surveillance or to determine which control measures are needed. Examples include outbreaks in institutional settings and clusters of severe or unusual respiratory illness. **Local Health Department approval is REQUIRED for testing at the State Laboratory of Public Health**, with the exception of specimens submitted from ILINet providers. If testing cannot be performed at SLPH, it can be requested from commercial or hospital-based laboratories.
- Specific guidance regarding specimen collection and transport is available on the “Providers” tab at www.flu.nc.gov.

INFECTION CONTROL

- Facilities should use a hierarchy of controls approach to prevent exposure of healthcare personnel and patients and prevent influenza transmission within healthcare settings. Given the difficulty of



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distinguishing influenza from other causes of respiratory illness, consistent infection control measures should be applied for ALL patients who present with acute febrile respiratory illness.

- Infection control guidance for healthcare settings can be found at <http://www.cdc.gov/flu/professionals/infectioncontrol/healthcaresettings.htm>.
- Outpatient medical providers who are referring patients with suspected or confirmed influenza infection to emergency departments or other medical facilities should call ahead to alert the facility that the patient is arriving, and have the patient wear a surgical mask when entering the hospital. The patient should also be instructed to notify the receptionist or triage nurse immediately upon arrival that he or she has respiratory symptoms.

CONTROL MEASURES

- Annual vaccination against influenza is the best way to prevent infection, and is recommended for everyone ≥6 months of age who does not have a contraindication.
- All patients with confirmed or suspected influenza infection should be instructed to stay at home for at least 24 hours after resolution of fever (100°F [37.8°C]) *without* the use of a fever-reducing medication. Patients should be given guidance on home respiratory isolation, available at www.flu.nc.gov. Contact your Local Health Department for questions regarding additional control measures.
- Household contacts should be instructed to monitor themselves closely for illness. If they develop illness, they should stay at home and follow the guidance on home respiratory isolation.
- Post-exposure chemoprophylaxis should only be used when antivirals can be started within 48 hours of the most recent exposure. Post-exposure chemoprophylaxis with either oseltamivir or zanamivir should be considered for the following:
 - Close contacts of cases (confirmed or suspected) who are at high risk for complications of influenza, including pregnant women (see above).
 - Health care workers or first responders who had a recognized, unprotected close contact exposure to a person with confirmed or suspected influenza infection during that person's infectious period.
- Since post-exposure chemoprophylaxis has been associated with antiviral resistance, early recognition and treatment of illness (if necessary) should be emphasized as an alternative to prophylaxis for exposed persons. Detailed guidance regarding antiviral chemoprophylaxis is available at <http://www.cdc.gov/flu/professionals/antivirals/index.htm>.
- Please use every opportunity to educate patients regarding the importance of good respiratory hygiene, hand washing, and other basic protective measures. Also, please check that pneumococcal vaccine has been administered to all patients for whom it is indicated, including those 65 or older.

SURVEILLANCE AND TRACKING

- **The NC Division of Public Health (NC DPH) requires that physicians report all influenza-associated deaths to their Local Health Department. While pediatric influenza-associated deaths have been reportable since 2004, adult influenza-associated deaths became reportable in 2011.** An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza (any strain) by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. A death should not be reported if:
 1. There is no laboratory confirmation of influenza virus infection,
 2. The influenza illness is followed by full recovery to baseline health status prior to death, or
 3. After review and consultation, there is an alternative agreed upon cause of death.



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- The North Carolina Division of Public Health conducts very intensive surveillance for influenza using several systems. These include surveillance of all visits to emergency departments across the state, as well as surveillance and laboratory testing of patients seen by providers in our Influenza-Like Illness Network (ILINet) - approximately 90 practices across the state. We monitor hospitalizations and deaths that could be related to influenza in order to better understand the severity of the virus. Our testing and surveillance strategies are consistent with recommendations from CDC and make use of the strong influenza surveillance systems already in place in North Carolina.
- Influenza surveillance is different from many types of disease surveillance conducted by state and local health departments. Because flu is easily spread from person-to-person and affects a large percentage of the population, testing and reporting of every person with flu-like illness is not a practical or reliable way to monitor flu activity. For this reason, surveillance of influenza in North Carolina is not based on the reporting of individual cases.

Health care providers should contact their Local Health Departments or the Communicable Disease Branch for questions about influenza.

We will post updates with additional guidance as warranted on www.flu.nc.gov. Updates are also available from the CDC at www.cdc.gov/flu.



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